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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/776,086	02/02/2001	Gary S. Selwyn	S-91,756	9416

7590

11/20/2002

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EXAMINER

ZERVIGON, RUDY

ART UNIT

PAPER NUMBER

1763

DATE MAILED: 11/20/2002

5

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/776,086

Applicant(s)

SELWYN ET AL.

Examiner

Rudy Zervigon

Art Unit

1763

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 September 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) 18-25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 9-15 is/are rejected.
- 7) ☒ Claim(s) 7, 8, 16 and 17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 February 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 09 September 2002 is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Group I, claims 1-17 in Paper No. 3 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Drawings

2. The corrected or substitute drawings were received on September 9, 2002. These drawings are acceptable.

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the first and second power sources must be shown or the features canceled from the claims. No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Claims 1-6 and 9-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Woolley et al (USPat. 5,743,966). Woolley et al teaches:

9. Apparatus (Figure 1) for processing materials (18) in an AC-powered plasma (13.56MHz is the required power frequency of operation per FCC) comprising: an electrically conductive enclosure (26) defining an interior space with a surface and inlets for a gas (30,28) and for entry and exit of a material to be processed (see Figure); an electrode (14) spaced apart from the electrically conductive enclosure and capable of placing the material to be processed inside the interior space between the electrically conductive enclosure and the electrode, the material to be processed being in contact with the electrode (column 2, lines 50-55); wherein a gas introduced into the inlet for gas and an AC-powered voltage applied between the electrically conductive enclosure and the electrode creates a plasma (column 2, lines 45-55) in the interior space for processing the material to be processed as it passes through the electrically conductive enclosure.

10. The apparatus as described in Claim 9, wherein said electrode and said electrically conductive enclosure are cylindrically shaped – Figure 1.

11. The apparatus as described in Claim 9, wherein said electrode is a rotating roller (14') – Figure 2.

12. The apparatus as described in Claim 9, wherein said gas is comprised of an inert gas and a chemically reactive gas – column 3, lines 4-13.

13. The apparatus as described in Claim 12, wherein said inert gas is helium and said chemically reactive gas contains oxygen – although Woolley et al does not teach the use of helium gas as an alternative to argon gas, and that Woolley et al does not teach atmospheric pressure operation of the apparatus, it is well established that such limitations are statements of

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intended use (See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963)).

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over John D. Fales (USPat. 3,959,104) in view of Wooley et al (USPat. 5,743,966). Fales teaches:

1. An apparatus (Fig.5,10) for processing materials in a radio-frequency (122, Fig.10; "low frequency", column 4, line 49; 13.56MHz is the required power frequency of operation per FCC) plasma (column 4, lines 39-56) comprising: an electrically conductive enclosure (107, Fig.10) defining an interior space with a surface and openings for introduction of a gas (109; Fig.10) and for entry (102; column 7, lines 1-22) and exit (110) of a material (101) to be processed; an electrode (106abc; 105abc; column 7, lines 1-22) situated inside the interior space and spaced apart from the surface of the interior space a distance sufficient to allow placement of the material to be processed (Fig.10, 5); a mechanical action (104; column 7, line 8) for placing the material to be processed inside the interior space between the electrode and the electrically conductive enclosure (107, Fig.10; column 9, lines 9-15); wherein a gas is introduced into the interior space through the opening for introduction of a gas (column 9, lines 29-35).

2. The apparatus as described in Claim 1, wherein the means for placing the material to be processed comprises a roller (104; column 7, line 8).

3. The apparatus as described in Claim 1, wherein the gas is comprised of an inert gas and a chemically reactive gas (column 9, lines 29-35).

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4. The apparatus as described in Claim 1, wherein the gas is introduced at low flow rate (108/109; Fig.10).

5. The apparatus as described in Claim 3, wherein the inert gas is helium and the chemically reactive gas contains oxygen (column 9, lines 29-35).

John D. Fales does not teach a radio frequency voltage with a frequency of 13.56MHz. John D. Fales also does not teach atmospheric pressure operation of the plasma apparatus, although higher pressures are permissible (column 2, lines 27-34). However, it is well established that such limitations are statements of intended use (See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963)).

Fales also does not teach a radio frequency voltage (122) applied between the electrically conductive enclosure and the electrode. However, Fales does discuss the positioning of the powered lines across the conductive enclosure (column 9, lines 9-14).

Wooley et al is discussed above. Inclusive, Wooley et al teaches a similar apparatus (Fig.1) for processing materials in an AC power (Fig.1) plasma (column 2, lines 53-65) comprising: an electrically conductive enclosure (26, Fig.1) defining an interior space with a surface and openings for introduction of a gas (28, 30; Fig.1) and for entry and exit of a material (18) to be processed; an electrode (14) situated inside the interior space. Specifically, Wooley et al teaches an AC power applied between the electrically conductive enclosure and the electrode.

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It would have been obvious to one of ordinary skill in the art at the time the invention was made for John D. Fales to connect his AC power as being applied between the electrically conductive enclosure and the electrode as taught by Wooley.

Motivation for John D. Fales to connect his AC power as being applied between the electrically conductive enclosure and the electrode as taught by Wooley is drawn to the teachings of Wooley et al whereby "web tension" control loss due to the web sticking to the drum is alleviated in part by plasma flow control and generation by the powering configuration of Wooley et al.

Allowable Subject Matter

3. Claims 7, 8, 16, and 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

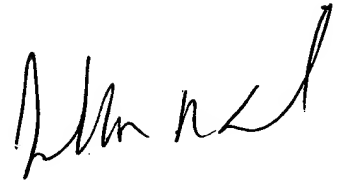
4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Rudy Zervigon whose telephone number is (703) 305-1351. The examiner can normally be reached on a Monday through Thursday schedule from 8am through 7pm. The official after final fax phone number for the 1763 art unit is (703) 872-9311. The official before final fax phone number for the 1763 art unit is (703) 872-9310. Any Inquiry of a general nature or relating to the status of this application or proceeding should be directed to

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the Chemical and Materials Engineering art unit receptionist at (703) 308-0661. If the examiner can not be reached please contact the examiner's supervisor, Gregory L. Mills, at (703) 308-1633.

A handwritten signature in black ink, appearing to read "Jeffrie R. Lund". The signature is stylized with a large initial "J" and a long, sweeping underline.

**JEFFRIE R. LUND
PRIMARY EXAMINER**